

## ***Bearing Specific Topics***

- Bearing Installation & Fitting
- Bearing Repair
- Hybrid Ceramic Ball Bearings
- Linear Bearings
- Plane Bearings
- Seal Selection
- Spherical Plain Bearings
- Vibration Analysis
- Wear Sleeves and Other Shaft Repair Options
- Planetary Roller Screws
- Bearings for the Food & Beverage Industry
- Split Roller Bearing Technology
- Bearing Mounting Tools

## ***Bearing Industry Information***

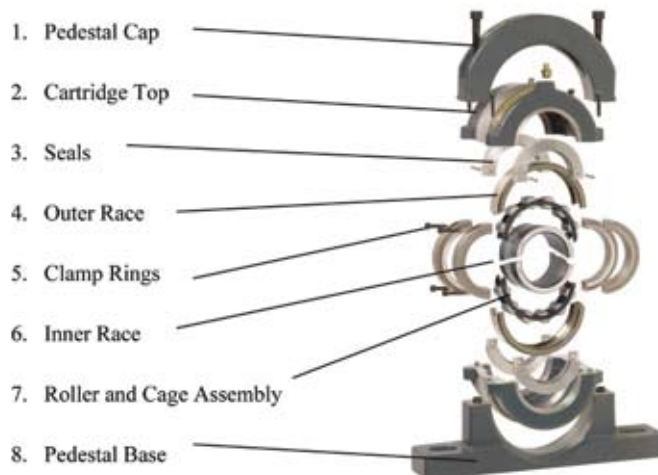
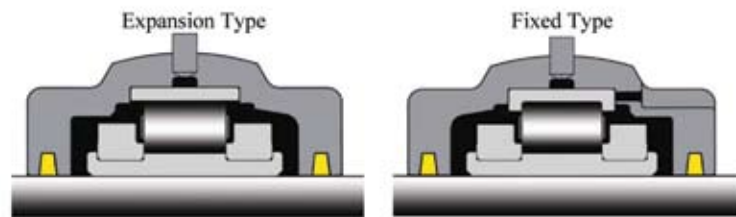
- Bearing Standards Organizations
- Brief History of Bearings
- The Domestic Bearing Industry: Investing in the Future
- History of Adhesives
- Load Ratings & Bearing Life
- Status of Bearing Load Ratings

## **Split Roller Bearing Technology**

The first split roller bearing was invented in 1907 and the basic design is still used in heavy industry around the world today.

### **What are Split Roller Bearings?**

As the term implies, split roller bearings are roller bearings where all the main components are engineered and made in halves. The inner race, roller and cage assembly, outer race, housing or flange support structure, and seals, are all manufactured as separable components. As with their solid counterparts, split roller bearings are manufactured in progressively heavier duty ratings to best suit the loads, speeds, and life requirements of a given application. Today's materials and manufacturing methods ensure the reliability and long life of split roller bearings, as expected, again, with their solid counterparts.



# Split Roller Bearing Technology

## Advantages of Split Roller Bearings

Split bearings combine all the features of conventional solid roller bearings with the added benefit of being easily assembled around a shaft. The complete assembly, being engineered and manufactured in halves, allows for the installation and inspection of the bearings without disrupting other elements of the machinery. Equipment design can be focused on objectives without having to accommodate bearing types, drive systems, couplings, gears, etc., during bearing inspections or maintenance.

Standard straight shafting can be used, eliminating the need for special shaft designs and tooling, press fits, etc. as often associated with solid bearings. Unnecessary damage to adjacent equipment via removal / replacement, and time consuming re-alignment of machinery is greatly reduced or eliminated, as positioning of couplings, motors, gear boxes, etc., is not disturbed. The personal safety of mechanics performing the work is improved for the same reasons. Simple hand tools are all that are required to install, inspect, or change split bearings. Design, maintenance and downtime are less costly for the life cycle of the machine. In many applications, such as large dual drive conveyors, a downtime of days can be reduced to hours, and hours to minutes. Savings are transferred directly to the user's bottom line.

## Applications in Various Industries

Split roller bearings are used in all major industries around the world. Applications in mining, cement making, steel and other primary metals, power generation, water and wastewater treatment, food, chemical and petro-chemical, the marine industry, lumber and veneer manufacturing, and glass making are but some of the industries that benefit from split roller bearings.

## Typical Equipment

Single and double inlet fans, bucket elevators, mine hoist gearing, crushers, pulverizers, pinion and trunnion shafts, cage and hammer mills, reciprocating screens, diesel gen sets, horizontal and vertical hydro-electric generators, engine test stands, marine propulsion shafting, clinker crushers, clinker collars, mixers, agitators, mechanical flocculators, RBC's, CBC's, tank scrapers, sludge presses, line shafts, vacuum dryers, ribbon and paddle blenders, dryer rolls, pulp washers, log decks, veneer dryers, lumber drying kilns are among the numerous applications. The industries and applications of split roller bearings are as broad as industry's needs. The benefits are as well.

Most manufacturing plants operate 24 hours per day, 7 days per week. Lost production and profits due to equipment maintenance and repair - whether scheduled or unscheduled - have been proven to be significantly reduced by utilizing split roller bearings. Expect to find them running where a high degree of reliability and a minimum of maintenance and downtime are absolute requirements.

Because of the number of component parts (compared to sleeve or spherical types), installation, requires more care and understanding compared to solid or sleeve bearings. When assembled methodically and following the recommended assembly procedure, a split bearing will provide optimum service over many years and may exceed the expected L10 bearing life when the manufacturer's maintenance guidelines are followed.